

June 6, 1871.

George Busk, Esq., V.P., in the Chair.

Prof. Owen, F.R.S., read the seventeenth of his series of Memoirs on *Dinornis*, containing a description of the sternum and pelvis, with an attempted restoration of the whole skeleton of *Aptornis defossor*. This paper will be published in the Society's 'Transactions.'

Prof. Flower, F.R.S., read a paper on the so-called Risso's Dolphin (*Delphinus rissoanus*), based on an examination of two specimens of this supposed species that had recently occurred on the English coast*. Prof. Flower, after a thorough investigation of this subject, came to the conclusion that the so-called *Delphinus rissoanus* was specifically identical with the *Delphinus griseus* of Cuvier, and that the species ought to stand as *Grampus griseus*.

This paper will be published in the Society's 'Transactions.'

The following papers were read:—

1. On the Occurrence of the Ringed or Marbled Seal (*Phoca hispida*) on the coast of Norfolk, with Remarks on the Synonymy of the Species. By W. H. FLOWER, F.R.S., V.P.Z.S., &c.

[Received June 5, 1871.]

While engaged in preparing a catalogue of the animals of Norfolk for the Norfolk and Norwich Naturalists' Society, Mr. Southwell met with the skull of a Seal in the Norwich Museum, which, with the permission of the authorities of the Museum, he submitted to my examination for the purpose of identification and, if need be, description, sending me the following history of the specimen:—

“Mr. J. H. Gurney bought the Seal in the Norwich Fish-market, and had the skull and skin preserved. When purchased it was in the flesh, quite fresh and in perfect condition; the fur was of a grey colour. The person of whom he bought it told him it came from some neighbouring part of the coast; but the exact locality he does not now remember. The date of its occurrence was some time previous to June 1846, probably in the spring of that year. It was also examined in the flesh by the late Mr. Thomas Brightwell, of Norwich; but I cannot find any record of the occurrence. The skull was presented to the Norwich Museum on Sept. 14, 1846, as the cranium of the ‘Marbled Seal.’”

I am not able to learn whether the skin is at present in existence.

As this skull belongs to a species which is not generally admitted into the actual British fauna, it appears desirable that its characters

* Cf. P. Z. S. 1870, p. 128.

should be described in sufficient detail to leave no doubt as to the correctness of the specific determination.

Zoologists are now generally agreed that four well-defined species of Seal of the restricted genus *Phoca** (an extremely natural group, characterized by having $i. \frac{3}{2}$, $c. \frac{1}{1}$, $p. \frac{4}{4}$, $m. \frac{1}{1}$, total 34, all the teeth of the premolar and molar series, except the most anterior, with two roots) inhabit the shores north of the Atlantic. These are *P. barbata*, *P. grænlandica*, *P. vitulina*, and a fourth, about the specific name of which there is unfortunately no general agreement. To account for and to endeavour to clear up the difficulty of the synonymy of this species (to which the skull in the Norwich Museum belongs) it will be necessary to refer to the principal facts concerning the literary history of the genus.

The natives of Greenland appear to have long ago distinguished these four species, and to have bestowed distinctive vernacular names upon them, which are given in Crantz's well-known history of that country, published in 1765, though the descriptions which accompany them have, as might be expected, no scientific accuracy.

In the 12th edit. of the 'Systema Naturæ' (1767) all the true Seals (as above restricted) are confounded under the name of *Phoca vitulina*; but in Gmelin's edition (1788) *P. vitulina*, *P. grænlandica*, *P. barbata*, and *P. hispida* are distinguished, besides others which are now considered to belong to different genera, and therefore do not concern us in the present inquiry.

Between these dates O. F. Müller's 'Prodromus Zoologiæ Danicæ' (Copenhagen, 1776) had been published, and contained in the introduction (p. viii) a list of Greenland animals communicated to the author by O. Fabricius, after the rest of the work had been printed. In this list *P. barbata*, *P. grænlandica*, and *P. fœtida* are named, in addition to *P. vitulina*, the only true *Phoca* mentioned in the body of the work, and which was evidently, as in the 'Systema Naturæ,' a compound of several species, as shown by the various vernacular names assigned as synonyms. No description is given of these new species; but the Greenland names are added, *P. fœtida* being the *Neitsek* and *Neitsilek*.

In 1780 Fabricius published his 'Fauna Grænlandica,' containing tolerably full accounts of all the above-mentioned four species of Greenland Seals; and, although descriptions of the external peculiarities of such very variable animals as Seals, unless extremely detailed and accompanied by osteological characters, are very difficult to recognize, there can be little doubt that the four species now known to exist are intended, and that Fabricius's *P. fœtida* is the animal now under consideration. The statement "*est hæc minima omnium*" is alone almost sufficient to establish this point. *Neitsek*, Crantz, is given among the synonyms of the species.

In the mean time, however, the third part of Schreber's 'Säugethiere' had appeared (1778 is the date on the titlepage of the volume; but the part must have been published previously, as it is

* Nilsson, Skand. Fauna, 1820; equivalent to F. Cuvier's *Callocephalus*, Mém. du Mus. xi. 1824.

quoted by Erxleben), in which a brief description (p. 312) is given of "der rauhe Seehund," which is latinized in the figure (pl. 86) into *Phoca hispida*, although this name is not given in the text. This is evidently founded upon the "Rough Seal" of Pennant (Synopsis of Quadrupeds, p. 341, 1771), the description of which is a mere reproduction of Crantz's account of the *Neitsek*. There is nothing either in Schreber's description or figure to identify the species; and it has since been thought (as by A. Wagner in his edition of this part of Schreber's work, 1846) to refer to a totally distinct animal, viz. *Halichoerus grypus*.

Erxleben, in his 'Systema Regni Animalis: Classis I. Mammalia' (1777), describes *Phoca vitulina*, *P. grœnlandica*, *P. barbata*, and *P. hispida*. The brief description of the latter is taken from Schreber (which, as mentioned above, is mainly derived from Crantz), who is given as the authority for the name; but *P. fœtida* (Müller, Prodr. Zool. Dan.) is given as a synonym.

This brings us back to Gmelin in 1788, who adopts the species and nomenclature of Erxleben.

In 1790 Fabricius published an elaborate paper on the Greenland Seals*, in which he redescribes his *P. fœtida*, but withdraws the name he had bestowed upon it in favour of *P. hispida*, as he believes that it is the same species as that described by Schreber, Erxleben, and Gmelin under that name, which, he says, has therefore the priority over his own. In this paper figures are given of the skulls of *P. grœnlandica* and *P. barbata*, *Halichoerus grypus* and *Cystophora cristata*, but unfortunately none of *P. hispida*; or its specific identity would have been absolutely determined.

Although the name of *P. fœtida* was thus definitely withdrawn by its author, it has been revived and adopted by many recent zoologists, as the table of synonyms (p. 509) will show.

Nilsson, in 1820, not being able to satisfy himself that the species had been clearly determined by either of these names, when giving the first thoroughly accurate and detailed account of its characters, renamed it *P. annellata*†. This name has also been adopted by many modern authors.

In the 'Mémoires du Muséum' (tome xi. 1824) Fr. Cuvier (being apparently unacquainted with Nilsson's work) gave figures of the skulls of all four species of *Phoca*, three views of each, on one page (tab. 12), and therefore well adapted for comparison. Although they are taken from rather immature specimens, and not all of corresponding ages, they give the most characteristic differences clearly, and there is no difficulty in recognizing the species now under consideration in that to which the name of *hispida* is applied, apparently the designation under which it was received from Reinhardt (see fig. 3, *g*, *h* and *i*). In the same memoir the name of *P. discolor* is proposed for a Seal which had lived in the Jardin des Plantes, and

* In 'Skrivter af Naturhistorie Selskabet,' Copenhagen, 1st vol.

† Skand. Fauna, i. p. 362, 1820; see also "Entwurf einer systematischen Eintheilung und speciellen Beschreibung der Phoken, von Nilsson, aus dem Schwedischen übersetzt von W. Peters," Wiegmann's Archiv, viii. 1st vol. p. 301 (1841).

which is figured and of which the external characters are described in the 'Histoire Naturelle des Mammifères,' tome i. ix. (1819), as the "*Phoque commun*." This latter has since been recognized as belonging to the same species as Nilsson's *P. annellata*, and as the skull figured by Cuvier as *P. hispida*. In a later fasciculus of the 'Hist. Nat. des Mammifères,' it is spoken of as the "*Phoque marbré*;" and the figure has been copied in Hamilton's "Amphibious Carnivora" in the 'Naturalist's Library' as that of the "Marbled Seal."

The principal synonymy of the species will therefore be as follows:—

Neitsek, Crantz, Hist. von Grönland, i. p. 164 (1765).

The Rough Seal?, Pennant, Synopsis of Quadrupeds, p. 341 (1771).

Phoca fœtida (not described), Fabricius, in Müller's 'Prodromus Zoologiæ Danicæ,' p. viii (1776).

P. hispida?, Schreber, Säugethiere, pt. iii. tab. lxxvii. (before 1778).

P. hispida?, Erxleben, Systema Regni Animalis, p. 589 (1777).

P. hispida?, Gmelin, Systema Naturæ (1778).

P. fœtida, Fabricius, Fauna Groenlandica, p. 13 (1780).

P. hispida (Fiordsælen), Fabricius, Skriv. af Natur. Selskabet, Copenhagen, vol. i. pt. 2. p. 74 (1790).

P. fœtida, Desmarest, Mammalogie, Ency. Méthod. (1820).

P. annellata (Ringlad Skül), Nilsson, Skand. Fauna (1820).

Callocephalus hispidus, F. Cuvier, Mém. du Muséum, xi. (1824) (skull).

C. discolor, F. Cuvier, *ibid.* (external characters).

P. annellata, Thienemann, Reise in Norden Europa's, pt. i. Nat. Bemerk. p. 83, tab. 9-12 (1824).

P. fœtida, Fischer, Synopsis Mammalium, p. 377 (1829).

P. annellata, A. Wagner, Schreber's Säugethiere, pt. viii. (1846).

Callocephalus fœtidus, Gray, Cat. Seals Brit. Mus. 1850, p. 23.

P. fœtida, Blasius, Säugethiere Deutschlands (1857).

P. annellata, Giebel, Die Säugethiere, p. 137 (1859).

P. hispida, Gaimard, Voy. Island. Mammalia, pl. 10. f. 1 & 2.

P. annellata, Radde*, Reisen im Süden von Ost-Sibirien, i. p. 296, tab. 1-3 (1862).

Pagomys fœtidus, Gray, Proc. Zool. Soc. (1864), p. 31; Cat. Seals and Whales in Brit. Mus. (1866) p. 23.

Although it may still be a matter of opinion which of these names ought to be adopted, it appears to me that, on the whole, preference should be given to *hispida*, on account of priority; for although the earliest descriptions under this name are very meagre and inaccurate, they are avowedly founded on the *Neitsek* of Crantz, the appellation by which this Seal is known to the Greenlanders to this day according to Mr. R. Brown †, and are therefore intended for this species, and especially because Fabricius in 1790 definitely adopted the name,

* This author gives a detailed description, with figures, of the Seal of Lake Baikal, which appears to be a variety of this species.

† "On the Seals of Greenland," P. Z. S. 1868, p. 414.

withdrawing that of *fetida*. I am further strengthened in this opinion by finding that those eminent Danish naturalists Steenstrup* and Reinhardt† both use *hispida* when speaking of this Seal.

The name may perhaps be objected to as not strictly appropriate; but a similar objection might also be made to the others; and this is a dangerous ground for superseding the law of priority in a case where the name can be hardly said to "imply a false proposition which is likely to propagate important errors"‡.

This Seal, which is the *Floe-rat* or *Flaar-rat* of the Northern English and Scottish Sealers, appears to be essentially a boreal species. Mr. R. Brown ("On the Seals of Greenland," P. Z. S. 1868, p. 415) says, "In the Spitzbergen sea they appear to be confined to high latitudes, and especially to the parallels of 76° and 77° N.; and it is in these latitudes that the whalers chiefly find them. In Davis's Strait it is to be found all the year round, but particularly up the ice-fjords. Its capture constitutes the most important feature of the Seal-hunt in North Greenland; but many are also killed in South Greenland, the Neitsik figuring largely in the trade-returns of that Inspectorate." Nilsson speaks of it as being found on all the Scandinavian coasts, and as having been met with as far south as the Channel, on the strength of specimens in the Paris Museum from that locality; but he was unable to find any proof of its having been met with on the coast of England.

Nor have I been able to discover any positive evidence that it can at the present day be reckoned a British species, although there is little doubt that it must occasionally visit our shores, where its occurrence would be easily overlooked.

As conjectured by Lloyd §, it may be identical with the *Bodack* or *Old Man* of the Hebrides, described by J. Wilson as the smallest and most rare of the indigenous Seals of those islands ||—though, on the other hand, Edmonston does not include it in his account of the Seals found in the Shetland Islands, and appears even to doubt its existence ¶.

Recently Professor Turner has shown that the numerous remains of Seals found in the various beds of clay of the glacial period in the south-eastern portion of Scotland should be referred to *P. hispida***.

I must now advert to the characters by which the skull in the Norwich Museum has been determined to belong to this species.

* "Melketandsættet hos Remmesælen, Svartsiden og Fjordsælen (*Phoca barbata*, O. Fabr., *Ph. grønlandica*, O. Fabr., og *Ph. hispida*, Schr.)," Vid. Medd. f. d. Naturh. Forening, 1860. Kjöbh. 1861, s. 251-261.

† "Om Klapmydsens ufødte Unge og dens Melketandsæt," Naturh. Foren. Vidensk. Meddelelser, 1864.

‡ Report of Nomenclature Committee, British Association, 1842.

§ Game Birds and Wild Fowl of Sweden and Norway, 1867, p. 399.

|| "Notes regarding the distinctive habits of the Scotch *Phocæ*," Mag. Zool. & Bot. vol. i. 1837, p. 539.

¶ "On the Distinctions, History, and Hunting of Seals in the Shetland Islands," Mem. Werner. Soc. Nat. Hist. vol. viii. pt. 1, 1839, pp. 1-48.

** Journal of Anatomy and Physiology, May 1870, p. 260.

It must first be mentioned that it is that of a very aged animal, as shown by the condition of the cranial sutures and the teeth. Of the latter some had been lost during life, and others after the preparation of the skull; and all those that remain are worn down nearly to the level of the alveolar border, so that they are of little use for identification. As far, however, as their characters serve, they agree with those of other specimens of *P. hispida* with which I have compared them, being rather smaller than those of *P. vitulina*, and having the long diameter of the molars in a line with the alveolar border, and not oblique, as is almost always the case with the latter.

The deep angular emargination of the hinder border of the bony palate at once distinguishes this skull from that of either *P. barbata* or *P. grœnlandica*; so that *P. vitulina* is the only one with which it could be confounded. It is distinguished from this species:—

1st. By its small size; for though Seals have a considerable range of variation in this respect, all the perfectly adult examples of *vitulina* I have met with are considerably larger than the present specimen, ranging from 7·7 inches (196 millim.) to 8·5 inches (216 millim.).

2nd. By the narrowness of the upper surface of the skull between the orbits, and also of the nasal bones. Different specimens of *P. vitulina* vary much in this respect, but they are always broader in this region than *P. hispida*.

3rd. By the presence of a rudimentary anteorbital process on the maxillary bone, which is always absent in *P. vitulina*.

4th. By the pointed form of the upper end of the ascending process of the præmaxilla, which is in contact for a considerable space with the nasal—whereas in *P. vitulina* this process is usually more or less truncated above, and is completely separated from or only just touches (at one point) the nasal. Both *P. barbata* and *P. grœnlandica* resemble *P. hispida* in this character.

5th. By the posterior palatine foramen being situated on or behind the maxillo-palatine suture. In *P. vitulina* it is placed in the maxillary bone altogether in front of the suture. This and the last are important diagnostic characters, being constant and readily recognized.

6th. By the wide interval on the upper surface of the cranium between the ridges which bound the temporal fossa, whereas in old specimens of *P. vitulina* these ridges meet at the vertex.

7th. By the larger size of the unossified spaces in the base of the skull lying to the inner side of the auditory bullæ.

8th. By the comparative shallowness (vertically) of the hinder portion of the ramus of the mandible, occasioned by the smaller development of the region of the angle, and especially of the anterior margin of the coronoid process, which is altogether weaker than in *P. vitulina*.

9th. By the form of the inferior margin of the ramus of the mandible, which in the present species (as in *P. barbata* and *grœnlandica*) has a conspicuous expansion inwards a short distance behind the symphysis, which causes the edges of the rami to continue more or less approximated for nearly half the length of the lower border;

whereas in *P. vitulina*, which has not this expansion, they diverge rapidly immediately behind the symphysis. I must, however, remark that some examples of the latter species present in this region a considerable approximation to the form met with in the other members of the genus.

The principal dimensions of the skull are as follow:—

	millims.
Length of cranium, from anterior extremity of præmaxilla to occipital condyle	183
Greatest breadth across zygomata	120
Breadth of skull in temporal fossæ, just above the posterior roots of the zygomata	90
Breadth of frontals between orbits	8
Breadth of both nasals at middle of their length	9
Length of nasal	44
Breadth of occipital condyle	62
Breadth of foramen magnum	26
Height of foramen magnum	21
Greatest length of malar bone	49
Breadth between external borders of lower margin of external auditory meatus	112
Shortest distance between the auditory bullæ (near their anterior ends)	33
Antero-posterior length of auditory bullæ	37
Length from lower border of foramen magnum to bottom of notch in middle of hinder border of palate	100
From the last-named spot to the anterior extremity of the præmaxilla	75
From anterior extremity of præmaxilla to hinder edge of posterior molar tooth	62
From anterior extremity of præmaxilla to anterior margin of orbit	53
Breadth between inner surfaces of posterior upper molar teeth	39
Breadth between upper canines	16
Length of ramus of mandible from anterior extremity to posterior edge of condyle	117
From anterior extremity to apex of subangular process	101
From the top of the coronoid process to the apex of the subangular process	55
From the posterior edge of the condyle to the anterior edge of the masseteric depression	45
Height of ramus opposite last molar tooth	21
Length of symphysis	22
Width between apices of subangular processes	63
Width between outer edges of condyles	100

2. On some Bats collected by Mr. F. Day in Burma.
By Professor W. PETERS, F.M.Z.S.

[Received May 16, 1871.]

Mr. Selater has very kindly sent to me a small collection of Bats from Burma, which, although consisting only of four species, contains a very interesting new form of *Rhinolophi*. This is a new proof how much is still to be done for a perfect knowledge of a very interesting, and in the household of nature very important, division of Mammalia, if only half as much care were taken to search for them as for the collection of doubtless much more attractive birds.

1. CYNONYCTERIS AMPLEXICAUDATA, Geoffroy.

Pteropus leschenaultii, Desmarest.

2. PHYLLORHINA FULVA, Gray.

Hipposideros fulvus et *murinus*, Gray (1838) = *Rhinolophus fulgens* et *murinus*, Elliot (1838) = *Phyllorhina aurita*, Tomes (1859) = ? *Hipposideros aruensis*, Gray (1858).

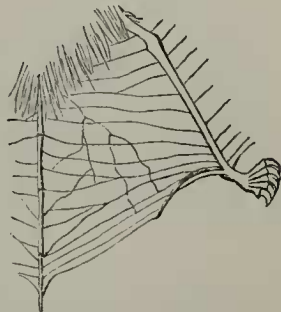
This very distinct species, first known from Madras and Ceylon, has been found by Mr. Swinhoe in Amoy, is very likely identical with Dr. Gray's *H. aruensis*, and has therefore probably the same geographical distribution as *Ph. diadema*.

Fig. 3.

Fig. 1.



Fig. 2.



Phyllorhina trifida. (Natural size.)

Fig. 1. Head, from the side.

2. Head, in front.

3. Right hinder extremity, with the tail and interfemoral membrane.

3. PHYLLORHINA TRIFIDA, n. sp.

Auriculis mediocribus, basi dilatatis, apice acutis; prothematis margine superiore trifido, haud incrassato: metacarpo tertio quarto brevior; patagiis tarso affixis; supra brunnea, subtus alba.

Related to *Ph. tridens* and *Ph. tricuspidata* in the form of the
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nose-leaf, the present species is easily to be distinguished from them by the characters given in the diagnosis.

The upper margin of the nose-leaf is not thickened as in those two species; and the three points are much larger. The ears are pointed, hardly longer, but much larger than in *Ph. tricuspidata*.

The fur is long and soft, that of the upperside and of the sides of the belly white with brown points, that of the middle of the belly entirely white.

The metacarpus of the third finger is shorter than that of the fourth finger, and not longer, as in *Ph. tridens* and *Ph. tricuspidata*.

The alar membrane is attached as far as the base of the metatarsus, and the point of the tail is much less (only for 3 millims.) exerted than in *Ph. tridens* and *tricuspidata*.

	millims.			
Total length	75			
Head	16·5			
Length of ear.....	12			
Breadth of ear	10			
Tail.....	30			
Humerus	23			
Ulna	40			
	metac.	1st ph.	2nd ph.	cartilage.
Length of 1st finger				5
„ 2nd finger.	29·5	0		
„ 3rd finger.	27·5	14·2	23·2	2
„ 4th finger.	29·5	11·4	8·5	bifurcate
„ 5th finger.	23·5	12·2	9·5	„
Femur.....	17			
Tibia	16·5			
Foot, with claws.....	7			
Spur	9			

A single adult male was in the collection.

4. TAPHOZOUS LONGIMANUS, Hardwicke.

3. Notes on Mr. Theobald's observations on Dr. Gray's Paper on Tortoises. By Dr. J. E. GRAY, F.R.S. &c.

[Received May 22, 1871.]

In the 'Proceedings' of the Society for 1870, p. 674, there are some notes by Mr. Theobald on my paper on the families and genera of Tortoises, published in the 'Proceedings' of the Society for 1869, p. 165. I have very few remarks to make upon them, and take them in the order they occur. I may merely premise that zoologists generally give India its ancient and classical signification, and not the confined political one which certain Indian zoologists wish to apply to it.

Secondly, except nine specimens of Tortoises which Mr. Theobald gave to the museum, the museum purchased the collection which Mr. Theobald formed, from a dealer, to whom he had sold it, as a collection of Pegu reptiles.

None of the Tortoises had any special habitat of any kind attached to it; and the heads were not marked as coming from any particular species; so that if I made any mistakes in the habitats, or in saying the "thorax was unknown" of a head, it arose from the negligence of the collector, which is more unaccountable as we have since learnt that the collection consisted not only of the specimens Mr. Theobald collected in Pegu, but also of specimens that came from elsewhere, and which he obtained in exchange for other specimens from the Asiatic Society of Bengal. Mr. Theobald is not quite correct when he says I give "India" as the locality of *Scapia falconeri*. I gave India with a ?, and I gave the reason why I thought it might come from that country, and at the same time expressed my doubts.

It is just the same with some of the other observations on the habitats.

Thirdly, Mr. Theobald says he has no confidence whatever in the distinctness of species based on skulls only. My experience, which has been very considerable, has led to a very different conclusion; and Mr. Theobald did not seem to be aware of their importance in the distinguishing of the species of *Trionyx* and *Batagur* when he published his paper on the reptiles of Pegu, in the 'Journal of the Linnean Society,' vol. x. p. 16, or in the 'Catalogue of the Reptiles of Pegu,' else he certainly would have given more distinct characters to his species.

1. TESTUDO INDICA.

Mr. Theobald objects to this specific name. There is a very large number he can choose from; for, unfortunately, this species has been described under a number of names; but I prefer not to change one which is so well known, and which was the first given to it.

2. TESTUDO (SCAPIA) FALCONERI.

Mr. Theobald observes "that in default, therefore, of more exact information, the evidence before him pointed to the conclusion that the skull whereon *T. falconeri*, Gray, had been based was no other than the identical skull of *T. phayrei*, Blyth, missing from the Calcutta Museum." The only evidence there appears to be is, that there is a specimen of *T. phayrei* without a skull in that museum. There does not appear in the paper to be any attempt at comparing the figure of the skull with the head of the other, perfect specimen of this species in the museum, which, one would have supposed, a zoologist would have done before he made such a suggestion. I should be very glad to hear that such a comparison had been made, either with the head of the perfect specimen, or, what would be better, with fresh skulls of this Tortoise, which does not

appear to be rare in "Burmah," or rather, I believe, in Arracan; then I should be very glad to adopt it, as it would erase a very imperfectly described nominal species from the list.

The interesting part of his notes is where Mr. Theobald says that *Testudo phayrei* is a true *Testudo*, with a regular sternum and separate caudal shield; therefore Mr. Blyth was in error when he informed me and Dr. Günther that *Manouria emys* was the same as his *T. phayrei*, an idea adopted by Mr. Theobald in his 'Catalogue of the Reptiles of Pegu,' and in his 'Catalogue of the Reptiles in the Museum of the Asiatic Society of Bengal,' where, after having seen the specimens, he placed it as *Manouria emys*.

It is to be observed that if the head should prove to be the same as the one on which my genus *Scapia* is founded, it will go to more firmly establish the propriety of having formed the genus *Scapia*, as *Testudo phayrei* has, according to Mr. Theobald, the hitherto unobserved combination of normal sternal shields, like *Testudo*, and separate caudal shields, like *Manouria* and the freshwater Tortoises, so that it forms a section or genus by itself.

Mr. Theobald believes that the skull on which *Scapia falconeri* was established belonged to this species. He may possibly be right; for it is a head of a large Land-Tortoise, of which we do not know the body, and which may perhaps come from India, or rather Hindostan; and *Testudo phayrei* is a large Land-Tortoise, the head or skull of which has not been described, although we now learn that the typical specimen has the head on it, and the general form and external characters of the skull are usually to be seen through the skin. I should probably have made this suggestion myself when I established the genus from the skull, and mentioned the characters by which it was known from the skulls of all the large Land-Tortoises then known; but the necessity of referring to the undescribed head of *T. phayrei* did not occur to me, as at that period I believed, on the authority of Mr. Blyth and Mr. Theobald, who had the specimens at their command, that it was the same as *Manouria*, with which I did compare it.

Mr. Theobald must excuse my not adopting his suggestion till an accurate comparison has been made between the skull of *T. phayrei* and *Scapia*, more especially as Mr. Theobald has already, with "culpable haste," referred the two typical specimens of *T. phayrei* to two species, indeed I may say genera, to which he now says they do not belong. It is to be hoped some competent zoologist will make the comparison which Mr. Theobald and his friends seem disinclined to do. Mr. Theobald further suggests that the skull which I described may have formerly belonged to a thorax in the Indian Museum. I must say I see no evidence of the fact worthy of a moment's notice, and it is a curious idea when they have not proved the identity of the two species; and the account of the state of the specimen and the manipulation it had undergone is so contradictory as to be utterly unworthy of credit. I must leave the question to the former and present curators of that museum, who know better their rules and manner of conducting the institution.

3. TESTUDO ELONGATA.

5. KACHUGA PEGUENSIS, 6. K. TRILINEATA, and 8. K. BERDMOREI.

I have already answered these remarks in my preliminary observations; and Mr. Theobald's impression that *K. peguensis* had been founded on a skull (probably aberrant) of either *Tetraonyx lessoni* or *Batagur trivittata*, and the idea that the skull of *Kachuga oldhami* is not distinct, do not require any answer from me.

If these skulls belong to the same animal, then the whole of the results of my examinations of Tortoise skulls, of which I must say I feel justly proud, must go for nothing; but Mr. Theobald has not discovered that *Kachuga oldhami* is the head of the well-known *Emys thurgi*, which proves to belong to the family *Bataguridæ*; and he surely will allow that *Tetraonyx lessoni*, *Batagur trivittata*, and *Emys thurgi* are distinct species, to whatever genera they may be referred.

The observations about the skulls of the males and females of *Kachuga trilineata*, under such circumstances, are not worth considering. I personally examined Mr. Theobald on his reasons for thinking the specimens which he brought home to be male and female of that species; and I thought they were very inconclusive, and required verification from an accurate and patient observer.

Testudo phayrei is not in my catalogue, therefore I give the synonyma of it:—

TESTUDO PHAYREI.

Testudo phayrei, Blyth, Journ. A. Soc. Beng. xvii. p. 56, xxiii. p. 639 (shortly described), xl. p. 77; Theobald, P. Z. S. 1870, p. 675.

Testudo indica, Theobald, Cat. Rept. Mus. As. Soc. Beng. p. 8.

Manouria emys, Theobald, Journ. Linn. Soc. x. p. 10, and Cat. Rep. Mus. As. Soc. Beng. p. 9.

"*Manouria emys*," Theobald, Cat. Rept. Mus. As. Soc. Beng. p. 9.
Hab. Arracan (*Blyth*); Burmah (*Theobald*).

As there is much confusion about *Manouria*, I take this opportunity of giving a revision of the synonyma:—

MANOURIA EMYS.

Testudo indica, Bibron's MS. in Mus. Zool Soc.

1844. *Testudo emys*, S. Müller, Verhandl. Reptiles, p. 34, t. iv.

1847. *Geoemyda spinosa* (adult), Cantor, Rept. Malay Penin.

1852. *Manouria fusca*, Gray, P. Z. S. 1852, p. 53; Ann. & Mag. Nat. Hist. 1855, vol. xv. p. 68; P. Z. S. 1860, p. 395; Ann. & Mag. Nat. Hist. 1861, vol. vii. p. 216; Cat. Shield Rept. p. 16, t. iii., Suppl. p. 15.

1854. *Teleophus luxatus*, Leconte, Pr. Acad. N. Sci. Phil. vii. p. 187 (Oct. 1854).

Manouria emys, Günther, Rept. Brit. India (not Theobald).

Hab. Penang (*Cantor*).

This animal has been curiously confounded with *Geoemyda spinosa*. Dr. Cantor, who first had it in a perfect state, in his list of Malay Reptiles considers it the adult of that species. Being desirous of obtaining the types of the species described by Solomon Müller, we purchased from Mr. Franks a series of specimens obtained from the Leyden Museum, with the labels of that institution attached to them. Having received in this series a young specimen of *Geoemyda spinosa* labelled *Testudo emys*, in the 'Catalogue of Shield Reptiles' I placed that species as a synonym of *Geoemyda spinosa*, not considering it necessary to consult the figure in Müller's book, or I should have discovered the mistake. Dr. Günther corrected this in his 'Reptiles of British India,' and properly changed the name from *Manouria fusca* into *Manouria emys*.

Mr. Theobald names this species "*Manouria emys*, Gray," instead of Schlegel or Günther; but there are many instances of want of accuracy of this kind, to which his note to *T. elongata* would be as applicable as to the oversight for which he quotes it.

M. A. Duméril, in his 'Catalogue of Reptiles,' p. 4. no. 7*, and in the 'Archives du Muséum,' described, under the name of *Testudo emydoides*, a specimen which he received from Leyden as *Testudo emys* of Müller; and his name is evidently a translation of the French name given to that species; but he does not mention the peculiar form of the pectoral plates, and it is very probable that he received, as the British Museum did, a young specimen of *Geoemyda spinosa* under a wrong name; and then his name and description will belong to the latter species and not to *Manouria*. They are very much alike, although belonging to different families.

4. A Monograph of the Lepidoptera hitherto included in the Genus *Elymnia*. By A. G. BUTLER, F.L.S., F.Z.S., &c.

[Received May 19, 1871.]

(Plate XLII.)

The present group of Butterflies is one of the most interesting of all the Rhopalocerous genera, not only because it exhibits a transition from the *Satyrinæ* to the *Brassolinæ* (see Cat. Fabr. Diurn. Lepid. p. 39), but because the species composing it are, almost without exception, of a mimetic character.

In the 'Genera of Diurnal Lepidoptera,' pp. 404, 405, only twelve species are enumerated; this number has since been more than doubled by the labours of Messrs. Hewitson, Wallace, Felder, and others, so that the genus is now beginning to assume a somewhat important aspect. I find, however, after a careful examination of the structural characters, that some of the species differ so considerably from the type form in the neuration of the hind wings that it will be advisable to separate them as a distinct genus; whilst others

exhibit differences of a less marked character, such as will only serve in an imperfect manner to separate the smaller sections of the group. I have noticed that this transitional state of things often occurs in genera largely acted upon by mimicry*; and I think it may be explained from the fact that the necessity for the various species to resemble different protected forms brings about a modification in the general outline of the wing, and consequently the position of the nervures employed in expanding and supporting the wing is liable to be altered.

ELYMNIAS.

Elymnius, Hübner, Verz. bek. Schmett. p. 37 (1816).

Melanitis (part.), Fabricius, in Illiger's Mag. vi. p. 282 (1807).

Biblis (part.), Latreille, Enc. Méth. ix. p. 10 (1819).

Front wings triangularly ovate; costa arched; outer margin dentate sinuate; inner margin in males arched, sometimes with patch of thickened scales on interno-median area. Hind wings subtriangular, more or less dentate sinuate, the longest tooth being at end of third median branch, and sometimes caudate.

Front wings with costal nervure much swollen at base, reaching middle of costa; first subcostal branch emitted at some distance before end of cell, second just before end, third at first third of distance from cell to apex, and the fourth and fifth forking from second third; upper discoidal emitted close to subcostal, lower discoidal obliquely a little below upper, reducing upper discocellular to about one-fourth the length of lower, which is strongly concave; second and third median branches emitted close together.

Hind wings with first subcostal emitted at some distance before end of cell (nearer to end in *E. patnu* than in any others); second subcostal and discoidal nervures emitted somewhat near together; upper discocellular horizontal, sometimes slightly oblique backwards (*E. penanga*, *panthera*, *casiphone*, *lais*, &c.) or forwards (*E. ceryx*); lower discocellular about four times the length of upper, strongly arched forwards (*E. undularis*, *panthera*, &c.) or backwards (*E. casiphone*, *lais*, &c.). The hind-wing cell therefore exhibits two external projections, one terminating in the second subcostal and discoidal, the other in the second and third median branches.

The species are all Asiatic, the type of the genus being *E. undularis*, Drury.

UNDULARIS group.

Colours. Males above black; front wings with discal series of lilac or lilac-tinted white spots; hind wings with more or less fulvous or ferruginous external area; below, all the wings marbled with ferruginous and whitish; hind wings generally with a conspicuous metallic subcostal spot.

Females above tawny or brown, with discal series of white or pale lilac spots; below paler than in males.

* As for instance in the genus *Dismorphia* (*Leptalis*, auct.) of the *Pierina*.

1. ELYMNIAS UNDULARIS.

♂. *Papilio undularis*, Drury, Ill. ii. pl. 10. figs. 1, 2 (1773).

♀. *Papilio protogenia*, Cramer, Pap. Exot. ii. pl. 189. figs. F, G (1779).

♂. *Elymnia jynx*, Hübner, Zutr. ex. Schmett. figs. 37, 38 (1818).

♂, N. India (obtained 1843 and 1856); ♀, Silhet (1845);
♂ ♀, Moulmein (1843); ♂, Nepal (*Wright*, 1864); ♀, Java
(*Horsfield*, 1851). B.M.

The female of *E. undularis* mimics *Danais chrysippus*.

2. ELYMNIAS NIGRESCENS, sp. n. (Plate XLII. fig. 1.)

♂. *Affinissima* E. undulari, differt alis nigrescentibus, posticis extrorsum vix ferruginosis, punctis submarginalibus valde distinctis; subtus obscurioribus punctis albidis posticorum valde distinctis: exp. alar. unc. 2, lin. 10.

♀. Alæ supra fusæ, anticæ nigrescentes, maculis discalibus lilacino-albidis velut in mare positis; posticæ punctis tribus quatuorve submarginalibus flavo-albidis: alæ subtus velut in E. undulari ♀, at obscuriores: exp. alar. unc. 3, lin. 1.

Sarawak (*Brooke*).

♂ ♀, B.M.

Very near to *E. undularis*, of which it is clearly a Bornean race. I know of nothing of which it is likely to be a mimic, unless it be a Bornean form of *Euploea mazares*.

3. ELYMNIAS HECATE, sp. n. (Plate XLII. fig. 2.)

♂. Alæ supra nigro-piceæ, purpureo certo situ micantes; anticæ striis sub quatuor subapicalibus lilacinis decrescentibus: subtus fusæ ferrugineo, velut in E. undulari marmoratæ; posticæ haud maculatæ: exp. alar. unc. 2, lin. 10.

Labuan (*Lowe*).

♂, B.M.

Another Bornean race of *E. undularis*, and possibly a mimic of *Euploea mazares*.

4. ELYMNIAS FRATERNA, sp. n. (Plate XLII. fig. 3.)

♂. Alæ supra piceæ; anticæ purpurascens; margine externo et apice fulvis; posticæ margine externo late fulvo; alæ subtus fere velut in E. undulari, at duplo pallidiores: exp. alar. unc. 3, lin. 1.

♀. Fere velut in E. undulari ♀, at majores; posticæ maculis marginalibus majoribus: exp. alar. unc. 3, lin. 4.

Ceylon (*Wenham*).

♂ ♀, B.M.

The Ceylonese representative of *E. undularis*, its female being barely distinguishable from that species, and therefore also a mimic of *Danais chrysippus*; the male, however, is a very different-looking insect.

5. ELYMNIAS CAUDATA, sp. n. (Plate XLII. fig. 4.)

♂. Alæ supra piceæ, anticæ areis interno-basali et externo fer-



1



2



3



4

New Species of Elymnias



ruginosis; *antica fascia subapicali et maculis tribus submarginalibus albis lilacino tinctis*; *postica dimidio externo fulvo, margine brunneo*: *alæ subtus ferrugineæ, velut in E. undulari* ♀, *pulcherrime albo plagiata et reticulata*: *exp. alar. unc. 3, lin. 5.*

Canara (*Ward*).

♂, B.M.

The male is certainly not an imitation of any known protected species; I should, however, expect to find the female like *Danais chrysippus* or an allied species.

PANTHERA group.

Colours. Brown or black, with paler submarginal nebulous band on upper surface, sometimes whitish in female; below grey-brown, with ferruginous reticulations; hind wings with six submarginal ocelli.

6. ELYMNIAS LUTESCENS.

♀. *Elymnias lutescens*, Butler, Ann. & Mag. Nat. Hist. 3rd ser. xx. p. 404, pl. 9. fig. 10 (1867).

♂ ♀: *Elymnias lutescens*, Wallace, Tr. Ent. Soc. Lond. p. 323. n. 4 (1869).

Sarawak and Labuan (*Lowe*).

♂ ♀, B.M.

The examples from Labuan have the submarginal band of the front wings more distinct, and in the female becoming quite white towards apex. I do not, however, feel justified in separating them from the type. The Labuan form reminds one of the species of *Euplœa*, of the *Crameri* group; the resemblance, however, is somewhat imperfect. The species perhaps mimics some *Euplœa* near *E. lapeyrousei*.

7. ELYMNIAS PANTHERA.

Papilio panthera, Fabricius, Mant. Ins. p. 39. n. 407 (1787).

Melanitis dusara, Horsfield, Cat. Mus. E. I. C. pl. 5. fig. 7 (1829).

Java (*Horsfield*).

B.M.

Probably mimics *Euplœa sepulchralis*.

PENANGA group.

Colours. Above grey, with broad subapical white band in front wings; below grey, reticulated with brown and white; hind wings sometimes with a metallic subcostal spot.

8. ELYMNIAS PENANGA.

Melanitis penanga, Westwood, Gen. D. L. p. 405. n. 9, note (1851).

Penang (received 1840).

Type, B.M.

9. ELYMNIAS SUMATRANA.

Elymnias sumatrana, Wallace, Trans. Ent. Soc. Lond. p. 325. n. 10 (1869).

Melanitis penanga, Hewitson, Ex. Butt. iii. *Mel.* pl. 1. fig. 1 (1863).

Sumatra (*Wallace*).

I know of nothing which *E. penanga* and *sumatrana* resemble mimetically.

LAIS group.

Colours. Similar to those of the pale green species of *Danais*.

10. ELYMNIAS LAIS.

Papilio lais, Cramer, Pap. Exot. ii. pl. 114. figs. A, B (1779).

Java (*Horsfield*).

♀ ♂, B.M.

Probably mimics *Danais grammica*, but perhaps *D. similis*.

11. ELYMNIAS TIMANDRA.

♂ ♀. *Elymnias timandra*, Wallace, Trans. Ent. Soc. London, p. 326. n. 13 (1869).

♂, Silhet (obtained 1845); ♀, Moulmein (1843). Types, B.M.

Probably mimics *D. similis*. It is, however, impossible to determine with certainty which species it would most nearly resemble when flying.

12. ELYMNIAS CERYX.

♀. *Melanitis ceryx*, Boisduval, Sp. Gén. Lép. i. pl. 9. fig. 8 (1836).

Java (obtained 1849).

♀, B.M.

Mimics *Danais albata*.

The male is described by Mr. Wallace in the 'Transactions of the Entomological Society.'

13. ELYMNIAS KAMARA.

♂. *Melanitis kamara*, Moore, Cat. Lep. E. I. C. i. p. 239. n. 516 (1857).

Java (obtained 1845).

♂, B.M.

Seems to mimic some *Euploea* allied to *E. modesta*.

LEUCOCYMA group.

Colours. Both sexes resemble *Euploea midamus* and allies.

14. ELYMNIAS CASIPHONE.

♂. *Elymnias casiphone*, Hübner, Samml. ex. Schmett. iii. (1816-1824).

♀. *Elymnias casiphone*, Butler, Trans. Ent. Soc. London, p. 488 (1870).

♂, Java (*Horsfield*, B. M.); ♀, Singapore, coll. Lieut. Roberts.

15. ELYMNIAS LEUCOCYMA.

Biblis leucocyma, Godart, Enc. Méth. ix. p. 326. n. 3 (1819).

♂. *Melanitis malelas*, Hewitson, Ex. Butt. iii. *Mel.* pl. 1. figs. 6, 7 (1863).

♂ ♀, Silhet (obtained 1845).

B.M.

16. ELYMNIAS MEHIDA.

Melanitis mehida, Hewitson, Ex. Butt. iii. *Mel.* pl. 1. figs. 2, 3 (1863).

Singapore.

Genus DYCTIS, Boisduval.

Front wings as in preceding genus.

Hind wings with false prædiscoidal cell; first subcostal emitted towards end of cell, nearer to the end in the females than in the males; second and discoidal emitted somewhat near together; upper discocellular more or less oblique (excepting in *D. mimalon*, ♂), slanting outwards; lower discocellular feebly concave or angulated, and about twice the length of upper; second and third median branches emitted near together.

Typical species *D. agondas*, Boisd.

The species are Asiatic or African.

1. DYCTIS AGONDAS.

♂. *Dyctis agondas*, Boisduval, Voy. de l'Astrolabe, Lep. p. 158, pl. 3. fig. 5 (1832).

♀. *Dyctis bioculatus*, Westwood, Gen. D. L. p. 354, pl. 54*. fig. 4 (1851).

Dorey (*Wallace*).

♂ ♀, B.M.

Mimics *Drusilla bioculatus*.

2. DYCTIS MELANE.

♂ ♀. *Melanitis melane*, Hewitson, Proc. Zool. Soc. p. 465, pl. 55 (1858).

Aru (*Wallace*).

♂ ♀, B.M.

Mimics several species of *Drusilla*. It is difficult to separate the various forms figured by Mr. Hewitson, as it is obvious that the female is subject to much variation.

3. DYCTIS MELANTHO.

♂ ♀. *Elymnia melantho*, Wallace, Trans. Ent. Soc. London, p. 330. n. 30 (1869).

Gagie Island (*Wallace*).

A local form of the preceding species.

4. DYCTIS ESACA.

♂. *Melanitis esaca*, Westwood, Gen. D. L. p. 405. n. 10, note (1851); Hewitson, Ex. Butt. iii. pl. *Mel.* 1. fig. 5 (1863).

Assam (obtained 1848).

Type ♂, B.M.

This species is stated by Hewitson and Westwood to be East-Indian. I find, however, that we obtained it through Mr. Warwick, from Assam. It probably mimics some form of *Euplœa* allied to *E. ledereri*.

5. DYCTIS HEWITSONII.

Elymnia hewitsonii, Wallace, Trans. Ent. Soc. Lond. p. 327. n. 20 (1869).

♂. *Melanitis leucozyma*, Hewitson, Proc. Zool. Soc. p. 53, pl. 9. figs. 3, 4 (1861).

Macassar, Celebes (Wallace).

♂ ♀, B.M.

Mimics *Euplœa mniszeehii* or *E. gloriosa*, apparently the former.

6. DYCTIS HICETAS.

♂. *Elymnias hicetas*, Wallace, Trans. Ent. Soc. London, p. 327. n. 21 (1869).

Macassar, Celebes (Wallace).

This seems to differ but little from the preceding, of which I strongly suspect it to be a variety.

7. DYCTIS CUMÆA.

Melanitis cumæa, Felder, Nov. Voy. Lep. iii. p. 452. n. 745, pl. 61. figs. 9, 10 (1867).

Gilolo.

Nearly allied to the preceding.

8. DYCTIS MIMALON.

Melanitis mimalon, Hewitson, Proc. Zool. Soc. London, p. 52, pl. 9. figs. 1, 2 (1861).

Menado, Celebes.

♂, B.M.

The finest species in the genus. It appears not to mimic any thing.

9. DYCTIS VITELLIA.

Papilio vitellia, Cramer, Pap. Exot. iv. pl. 349. figs. E, F (1782).
? *Euplœa vitella*, Montr. Ann. Sc. Phys. Nat. Lyon. p. 403 (1856).

Melanitis stellaris, Vollenhoven, Tijds. voor Ent. iv. p. 159, pl. 8. fig. 3 (1862).

Var. *Elymnias viminalis*, Wallace, Trans. Ent. Soc. London, p. 328. n. 25 (1869).

Amboina (Wallace).

B.M.

Mimics *Euplœa climene*.

10. DYCTIS CYBELE.

Melanitis cybele, Felder, Wien. ent. Monatschr. iv. p. 248. n. 98 (1860).

Batchian, Kaioa Island, Ternate (Wallace).

This species is unknown to me; it probably resembles one of the dark *Euplœæ*.

11. DYCTIS PAPUA.

Elymnias papua, Wallace, Trans. Ent. Soc. London, p. 329. n. 28 (1869).

New Guinea (Wallace).

Mr. Wallace says that "this species closely resembles a *Euplœa*." Unfortunately he does not mention which *Euplœa*.

12. DYCTIS MELIAS.

Melanitis melias, Felder, Wien. ent. Monats. vii. p. 120. n. 91 (1863); Nov. Voy. Lep. iii. pl. 61. fig. 11 (1867).

Bourias, Locban [Philippines].

Mimics *Euplœa swainsonii*.

13. DYCTIS PATNA.

♀. *Melanitis patna*, Westwood, Gen. D. L. p. 405. n. 6, note, pl. 68. fig. 2 (1851).

Silhet (obtained 1847).

Type, B.M.

Mimics *Euplœa callithoë*, a species allied to *E. splendens* and *E. superba*. It bears a superficial resemblance to *Elymnias leucocyma*.

14. DYCTIS EGIALINA.

Melanitis egialina, Felder, Wien. ent. Monatschr. vii. p. 121. n. 92 (1863); Nov. Voy. Lep. iii. pl. 61. figs. 7, 8 (1867).

Luzon [Philippines].

Mimics *Delias henningia* (*Pierinæ*).

15. DYCTIS BORNEENSIS.

Elymnias borneensis, Wallace, Trans. Ent. Soc. London, p. 324. n. 8 (1869).

Sarawak [Borneo].

Doubtless mimics some species of *Delias* (an *D. porsenna*?).

16. DYCTIS VASUDEVA.

Elymnias vasudeva, Moore, Cat. Lep. E. I. C. i. p. 238. n. 513 (1857).

Elymnias thycana, Wallace, Trans. Ent. Soc. Lond. p. 323. n. 7 (1869).

♂, Nepal (*Wright*); India (obtained 1856); ♀, Barrackpore (*Hearsey*).

B.M.

Mimics either *Delias descombesi* or *D. indica*; it is impossible to say which without seeing it alive.

17. DYCTIS BAMMAKOO.

♂. *Melanitis bammakoo*, Westwood, Gen. D. L. p. 405. n. 12, note, pl. 68. fig. 3 (1851).

Ashanti (obtained 1842).

Type, B.M.

Mimics *Planema gea* ♀ (*Acræinæ*).

Several males in Mr. Swanzy's collection.

18. DYCTIS PHEGEA.

Papilio phegea, Fabricius, Ent. Syst. iii. 1. p. 132. n. 407 (1793); Donovan, Ins. Ind. pl. 31. fig. 1 (1800).

West Africa.

♂, coll. Druce.

Mimics *P. gea* ♂.

5. A Revision of the Species formerly included in the Genus
Terias (*Pierinae*). By A. G. BUTLER, F.L.S., F.Z.S., &c.

[Received May 22, 1871.]

My principal object in the present paper is to refer the species of this very difficult group to the genera into which I separated it in my "Revision of the Genera of the Subfamily *Pierinae*" (Cist. Ent. iii. pp. 33-58). I shall not, therefore, increase the difficulty of determining the already numerous and nearly allied species by describing all the unnamed forms at my disposal, but shall rather strive to lighten the labours of my fellow-workers by clearing up, to the best of my ability, the somewhat confused synonymy already existing.

As one or two of the species of *Elodina* have been confounded by some Lepidopterists with *Terias*, I shall introduce that little genus into the present paper.

Genus 1. ELODINA, Felder,
Reise Nov. Lep. ii. p. 215 ("1865").

1. ELODINA EGNATIA.

Pieris egnatia, Godart, Enc. Méth. ix. p. 138. n. 63 (1836).

Pieris cirrha, Boisduval, Voy. de l'Astrolabe, pl. 2. f. 7 (1832).

Pieris parthia, Hewitson, Ex. Butt. i. *Pier.* 2. f. 12, 13 (1853).

Var.? *Elodina hypatia*, Felder, Reise Nov. Lep. ii. p. 216. n. 233 ("1865").

Var.? *Elodina thersasia*, Felder, *l. c.* p. 215. n. 232 ("1865").

Australia.

Coll. B.M.

2. ELODINA BOURUENSIS.

Elodina bouruensis, Wallace, Trans. Ent. Soc. London, 3. iv. p. 319. n. 4 (1867).

Bouru (*Wallace*); id.? Aru (*Wallace*).

Coll. B.M.

Nearly allied to *E. egnatia*, but apparently distinct.

3. ELODINA ANGULIPENNIS.

Terias angulipennis, Lucas, Rev. Zool. p. 431 (1852).

Pieris pallene, Hewitson, Ex. Butt. i. *Pier.* pl. 2. f. 8, 9 (1853).

Richmond River, Moreton Bay, Port Macquarie.

Coll. B.M.

4. ELODINA PADUSA.

Pieris padusa, Hewitson, Ex. Butt. i. *Pier.* pl. 2. f. 10, 11 (1853).

Australia.

Coll. B.M.

Nearly allied to the preceding species.

5. ELODINA SIGNATA.

Elodina signata, Wallace, Trans. Ent. Soc. London, 3. iv. p. 319. n. 8 (1867).

New Caledonia.

B.M.

Genus 2. SPHÆNOGONA, Butler*,
Cist. Ent. iii. p. 44. gen. 15, pl. 1. f. 13 (1870).

1. SPHÆNOGONA GRATIOSA.

Terias gratiosa, Hewitson, Gen. Diurn. Lepid. pl. 9. f. 5 (1847).
Venezuela. B.M.

2. SPHÆNOGONA ECUADORA.

Terias ecuadora, Hewitson, Equat. Lep. p. 2. n. 2 (1869).
Ecuador (*Buckley*).
A beautiful species allied to *S. gratiosa*.

3. SPHÆNOGONA INGRATA.

Terias ingrata, Felder, Verh. zool.-bot. Ges. Wien, p. 465. n. 1
(1869).
Terias gratiosa, Reakirt, Proc. Ent. Soc. Phil. ii. p. 359. n. 3
(1863).
Mexico; Chontales; Nicaragua; Polochic Valley. B.M.

4. SPHÆNOGONA XANTOCHLORA.

♀. *Terias xantochlora*, Kollar, Denkschr. Akad. Wiss. Wien,
math.-nat. Cl. i. p. 363. n. 36 (1850).
♂. *Terias bogotana*, Felder, Wien. ent. Mon. v. p. 84. n. 41 (1861).
Terias chloë, Felder, Reise Nov. Lep. ii. p. 199. n. 202 ("1865").
Terias gaugamela, Felder, l. c. n. 203, pl. 26. f. 5 ("1865").
Bogota. ♀ ♂, B.M.
The above species described by the Felders appear to me to be
identical with *T. xantochlora*.

5. SPHÆNOGONA LIMONEUS.

Terias limoneus, Felder, Wien. ent. Mon. v. p. 84. n. 43 (1861);
Reise Nov. Lep. ii. p. 200. n. 204 ("1865").
Venezuela.
Seems nearly allied to *S. xantochlora*.

6. SPHÆNOGONA SALOME.

Terias salome, Felder, Wien. ent. Mon. v. p. 84. n. 42 (1861);
Reise Nov. Lep. ii. p. 201. n. 206 ("1865").
Ecuador (*Felder*); Bolivia. B.M.

Dr. Felder says of this species, "The only male in our collection
is larger than *T. constantia* just described; the wings are as broad
as in *T. xantochlora*, Koll., and the hind wings more distinctly
angulate."

7. SPHÆNOGONA JAMAPA.

♀. *Terias jamapa*, Reakirt, Proc. Ac. Nat. Sci. Phil. p. 239.
n. 5 (1866).
Mexico.

* The type of this genus is an undescribed species from Archidona, allied to
S. constantia, ♂, Felder; Doubleday gives Quito as the habitat, but we have no
species of this group from that locality.

8. SPHÆNOGONA THEODES.

♀. *Terias theodes*, Felder, Wien. ent. Mon. v. p. 85. n. 45 (1861); Reise Nov. Lep. ii. p. 201. n. 207 ("1865").

♂. *Terias constantia*, Felder, l. c. n. 205 ("1865").

Venezuela.

B.M.

9. SPHÆNOGONA THEONA.

Terias theona, Felder, Reise Nov. Lep. ii. p. 202. n. 208 ("1865").

♀. *Terias theodes*, Felder, Wien. ent. Mon. v. p. 85. n. 45 (1861).
Venezuela.

Allied to *S. theodes*, but smaller; the wings shorter.

10. SPHÆNOGONA FABIOLA.

Terias fabiola, Felder, Wien. ent. Mon. v. p. 85. n. 44 (1861);
Reise Nov. Lep. ii. p. 199. n. 201 ("1865").

Venezuela.

B.M.

11. SPHÆNOGONA ARBELA.

Eurema arbela, Hübner, Zutr. ex. Schmett. f. 641, 642 (1832).

Brazil.

Not in British Museum. Allied to *S. salome*, from which it chiefly differs in the broader marginal band of the hind wings.

12. SPHÆNOGONA BOGOTANA.

Terias bogotana, Felder, Wien. ent. Mon. v. p. 84. n. 41 (1861);
Reise Nov. Lep. ii. p. 198. n. 199, pl. 26. f. 3, 4 ("1865").

Bogota.

Allied to *S. arbela*.

13. SPHÆNOGONA MEXICANA.

Terias mexicana, Boisduval, Sp. Gén. Lép. i. p. 655. n. 5, pl. 3 c.
f. 1 (1836).

Terias boisduvaliana, Felder, Reise Nov. Lep. ii. p. 200 ("1865").

Mexico.

B.M.

14. SPHÆNOGONA DAMARIS.

Terias damaris, Felder, Reise Nov. Lep. ii. p. 200 ("1865").

♀. *Terias mexicana*, Boisduval, Sp. Gén. Lép. i. p. 655. n. 3
(1836).

Terias depuiseti, Boisd. Lép. Guatemala, p. 11 (1870).

Mexico; Guatemala.

15. SPHÆNOGONA? ZELIA.

Terias zelia, Lucas, Rev. Zool. p. 430 (1852).

Colombia.

16. SPHÆNOGONA? ANGULATA.

Terias angulata, Wallengren, Wien. ent. Mon. iv. p. 34. n. 3
(1860).

Sandwich Islands.

Genus 3. LEUCIDIA, E. Doubleday,
Gen. Diurn. Lepid. p. 77 (1847).

1. LEUCIDIA ELVINA.

Terias elvina, Swainson, Zool. Ill. 1st ser. pl. 22 (1820).
Pernambuco.

B.M.

2. LEUCIDIA BREPHOS.

Mancipium vorax brephos, Hübner, Samml. ex. Schmett. i. pl. 143
(1806-27).
Venezuela; Pará.

B.M.

3. LEUCIDIA LEUCOMA.

Terias leucoma, Bates, Journ. Entom. i. p. 244. n. 16 (1861).
Leucidia elphos, Felder, Wien. ent. Mon. vi. p. 69. n. 17 (1862).
Upper Amazons.
Close to the preceding, if not a variety of it.

Genus 4. TERIAS, Swainson,
Zool. Ill. 1st ser. pl. 22 (1820).

1. TERIAS CLARA.

Terias clara, Bates, Journ. Entom. i. p. 243. n. 12 (1861).
Leucidia exigua, Prittwitz, Stett. ent. Zeit. p. 133. n. 1 (1865).
Var. *Leucidia pygmæa*, Prittwitz, l. c. p. 133. n. 2 (1865).
Tapajos; Honduras.
I believe *L. pygmæa* to be merely a dwarfed form of the species;
our examples vary immensely in size.

B.M.

2. TERIAS IMPURA.

Terias impura, Vollenhoven, Mon. Pier. p. 70. n. 11, pl. 7. f. 5
(1865).
Timor.
Curiously like *T. clara*.

3. TERIAS LIRINA.

Terias lirina, Bates, Journ. Entom. i. p. 244. n. 15 (1861).
Pará (*Bates*).
Closely allied to *T. clara*.

4. TERIAS ALBULA.

Papilio albula, Cramer, Pap. Exot. i. pl. 27. f. E (1775).
♀. *Mancipium fugax Nise*, Hübner, Samml. ex. Schmett. i.
pl. 146. f. 3, 4 (1806-27).
Pernambuco; Demerara; Venezuela.

B.M.

5. TERIAS? PASIPHAË.

Papilio pasiphaë, Cramer, Pap. Exot. i. pl. 80. f. E (1779).
Surinam (*Cramer*).
May come near *T. albula*, but is larger than any known species
of that group; possibly the female of *Pandemos arcas*.

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6. TERIAS MARGINELLA.

Terias marginella, Felder, Wien. ent. Mon. v. p. 97. n. 53 (1861).
Venezuela; Panamá; Bogotá. B.M.
Scarcely distinct from *T. albula*.

7. TERIAS SINOË.

Pieris sinoë, Godart, Enc. Méth. ix. p. 138. n. 66 (1819).
Papilio cassiæ, Sepp, Surin. Vlind. ii. pl. 56 (1848).
Terias celata, Felder, Verh. zool.-bot. Ges. Wien, p. 466. n. 4
(1869).
Var. *Terias leucilla*, Felder, l. c. n. 5 (1869).
Rio Grande; Honduras; Panamá. B.M.

8. TERIAS GNATHENE.

Terias gnathene, Boisduval, Sp. Gén. Léop. i. p. 680. n. 46 (1836);
Hübner, Zutr. ex. Schmett. f. 937, 938 (1837).
Jamaica; Honduras. B.M.

9. TERIAS AMELIA.

Terias amelia, Poey, Mem. Hist. Nat. de Cuba, p. 253. n. 12,
pl. 18. f. 11-13 (1851).
Cuba.
Nearly allied to the preceding.

10. TERIAS MESSALINA.

Papilio messalina, Fabricius, Mant. Ins. p. 22. n. 235 (1787).
Terias bulæa, Boisduval, Sp. Gén. Léop. i. p. 680. n. 47 (1836).
Eurema arabella, Hübner, Zutr. ex. Schmett. f. 973, 974 (1837).
Terias deflorata, Kollar, Denkschr. Akad. Wiss. i. p. 363. n. 37
(1850).
Terias iradia, Poey, Mem. Hist. Nat. de Cuba, p. 253. n. 13,
pl. 18. f. 14-17 (1851).
Jamaica; Honduras. B.M.

11. TERIAS MANA.

Terias mana, Boisduval, Sp. Gén. Léop. i. p. 681. n. 49 (1836).
Bolivia. B.M.

12. TERIAS AGAVE.

Papilio agave, Cramer, Pap. Exot. i. pl. 20. f. H, I (1775).
Eurema jodutta, Hübner, Verz. bek. Schmett. p. 96. n. 1019
(1816).
Pieris phiale (part.), Godart, Enc. Méth. ix. p. 157. n. 61 (1819).
Brazil; Pernambuco. B.M.

13. TERIAS PHIALE.

Papilio phiale, Cramer, Pap. Exot. i. pl. 27. f. F (1775).
Surinam.
Seems allied to *T. agave*; and is probably identical with *T. musa*,
Fabr.

14. TERIAS TAPEINA.

Terias tapeina, Bates, Journ. Entom. i. p. 244. n. 14 (1861).

Para (*Bates*).

Belongs to the *Agave* group.

15. TERIAS LUCINA.

Terias lucina, Poey, Mem. Hist. Nat. de Cuba, p. 252. n. 11, pl. 18. f. 8-10 (1851).

Terias arabella, Lucas, Hist. Cuba, vii. p. 515, pl. 16. f. 5, 5^a (1856).
Cuba.

Belongs to the *Agave* group.

16. TERIAS MUSA.

Papilio musa, Fabricius, Ent. Syst. iii. p. 195. n. 607 (1793).

Terias gentilis, Boisduval, Sp. Gén. Léop. i. p. 658. n. 9 (1836).

Terias columbia, Felder, Wien. ent. Mon. v. p. 86. n. 48 (1861).

Bogota.

B.M.

17. TERIAS FORNSI.

Terias fornsi, Poey, Mem. Hist. Nat. de Cuba, p. 443. n. 13 (1851).

Isle of Pines (*Gundlach*).

Allied to *T. lucina* and *amelia* of Poey.

18. TERIAS CONJUNGENS.

Terias conjungens, Herrich-Schäffer, Corr.-Blatt. Regensb. xviii. p. 167 (1864).

Cuba.

Next to *T. fornsi*; differs from it and *T. lucina* in its broader border, which more nearly approaches the inner margin.

19. TERIAS EUGENIA.

Terias eugenia, Wallengren, Wien. ent. Mon. iv. p. 33. n. 2 (1860).

?*Terias cubana*, Herrich-Schäffer, Corr.-Blatt. Regensb. xviii. p. 166 (1864).

Honduras; Haiti.

B.M.

20. TERIAS EBRIOLA.

Terias ebriola, Poey, Mem. Hist. Nat. de Cuba, p. 250. n. 9, pl. 24. f. 7-13 (1851).

Cuba.

Allied to *T. platæa* and *T. palmira*; possibly a variety of *T. eugenia*.

21. TERIAS JUCUNDA.

Terias jucunda, Boisduval et Leconte, Léop. Am. Sept. pl. 19. f. 1-3 (1827).

Var. *Terias lemnia*, Felder, Reise Nov. Lep. ii. p. 205. n. 213 (1865).

United States.

B.M.

22. TERIAS PALMIRA.

Terias palmira, Poey, Mem. Hist. Nat. de Cuba, p. 249. n. 8, pl. 24. f. 4-6 (1851).

Terias vitellina, Felder, Wien. ent. Mon. v. p. 86. n. 49 (1861).

Var. *Terias tegea*, Felder, Reise Nov. Lep. ii. p. 203. n. 210 (1865).

Var. ? *Terias lydia* (part.), Felder, Wien. ent. Mon. v. p. 87. n. 50 (1861).

Terias phœnicia, Felder, Reise Nov. Lep. ii. p. 205. n. 214 (1865).

Nicaragua; Panamá; Venezuela; Honduras. B.M.

23. TERIAS MEDUTINA.

Terias medutina, Felder, Wien. ent. Mon. v. p. 97. n. 52 (1861).
Venezuela.

Near *T. palmira*.

24. TERIAS SIDONIA.

Terias sidonia, Felder, Verh. zool.-bot. Ges. Wien, p. 465. n. 2 (1869).

Mexico. B.M.

25. TERIAS MYCALE.

Terias mycale, Felder, Reise Nov. Lep. ii. p. 204. n. 210 (1865).

Bahia (*Felder*); id. ? Pernambuco. ♂ ♀, B.M.

26. TERIAS PLATÆA.

Terias platæa, Felder, Verh. zool.-bot. Ges. Wien, xii. p. 474. n. 18 (1862).

Pernambuco; Brazil; Pará. B.M.

27. TERIAS ELATHEA.

♂. *Papilio elathea*, Cramer, ii. pl. 99. f. C, D (1776).

♀. *Terias midea*, Ménétréés, Nouv. Mém. Soc. Imp. Mosc. iii. pl. 11. f. 6 (1834).

Jamaica. B.M.

28. TERIAS ALBINA.

♀. *Terias albina*, Poey, Mem. Hist. Nat. de Cuba, p. 251. n. 10. pl. 24. f. 14-16 (1851).

Cuba.

Seems to be a slight variety of the preceding.

29. TERIAS RHODIA.

Terias rhodia, Felder, Wien. ent. Mon. v. p. 97. n. 51 (1861).

Terias elathea, var. *a*, Boisduval, Sp. Gén. Léop. i. p. 665 (1836).

Bogota. B.M.

30. TERIAS LYDIA.

Terias lydia, Felder, Wien. ent. Mon. v. p. 87. n. 50 (1861).

Venezuela (*Felder*): id. ? ♂ ♀, B.M.

31. TERIAS DELIA.

Papilio delia, Cramer, Pap. Exot. iii. pl. 273. f. A (1780).

Eurema demoditas, Hübner, Verz. bek. Schmett. p. 96. n. 1016 (1816).

Pieris दौरα, Godart, Enc. Méth. ix. p. 137. n. 59 (1819).

United States; and var. West Coast of Mexico. B.M.

32. TERIAS STYGMULA.

Terias stygmula, Boisduval, Sp. Gén. Lép. i. p. 661. n. 15 (1836).

Honduras. B.M.

33. TERIAS EUTERPE.

Colias euterpe, Ménétréés, Nouv. Mém. Soc. Imp. Mosc. iii. pl. 11. f. 4 (1834).

Pieris thymetus, Godart (nec Fabricius), Enc. Méth. ix. Suppl. 814. n. 56, 57 (1823).

♀. ?*Terias perimede*, Prittwitz, Stett. ent. Zeit. p. 134 (1865).

Var. *Terias sulphurina*, Poey, Mem. Hist. Nat. de Cuba, pl. 18. f. 1-3 (1851).

Jamaica; Haiti. B.M.

34. TERIAS LISA.

Xanthidia lisa, Boisduval et Leconte, Lép. Am. Sept. pl. 19. f. 4, 5 (1827).

Pieris smilda, Godart, Enc. Méth. ix. p. 136. n. 56 (1819).

North America; Illinois; East Florida. B.M.

35. TERIAS NICIPPE.

Papilio nicippe, Cramer, Pap. Exot. iii. pl. 210. f. C, D (1782).

Ohio; Philadelphia; Georgia; East Florida. B.M.

36. TERIAS HYONA.

Colias hyona, Ménétréés, Nouv. Mém. Soc. Imp. Mosc. iii. pl. 11. f. 5 (1834).

St. Domingo. B.M.

37. TERIAS PYRO.

Pieris pyro, Godart, Enc. Méth. ix. p. 137. n. 60 (1819).

St. Domingo.

May not this be the female of *T. hyona*?

38. TERIAS DESJARDINSII.

Xanthidia desjardinsii, Boisduval, Faun. Madag. p. 22. n. 3 pl. 2. f. 6 (1833).

Madagascar.

Seems from the figure to be very like the male of *T. hyona*.

39. TERIAS LÆTA.

Terias læta, Boisduval, Sp. Gén. Lép. i. p. 674. n. 36 (1836).

Terias jægeri, Ménétriés, Enum. Corp. Anim. i. pl. 2. f. 1 (1855).
Affghanistan; Landoor; Bhotan. B.M.

M. Ménétriés states that his *T. jægeri* and the two other Indian species figured on the same plate are from Haiti.

40. TERIAS MANDARINA.

Terias mandarina, De l'Orza, Lep. Japon. p. 18 (1869).
Japan.

Seems to belong to the *leta* group, but is not very near to any thing in the British Museum.

41. TERIAS VAGANS.

Terias vagans, Wallace, Proc. Zool. Soc. p. 357. n. 10 (1866).
North India. B.M.
Allied to *T. leta*, which it resembles in the shape of its wings.

42. TERIAS HERLA.

Terias herla, M^cLeay, King's Survey Austr. ii. p. 460. n. 144
(1827).
Australia, Cape York. B.M.

43. TERIAS LIBYTHEA.

Papilio libythea, Fabricius, Ent. Syst. Suppl. p. 427 (1798).
Terias parvula, Herrich-Schäffer, Stett. ent. Zeit. p. 78. n. 54
(1869).
Var. ? *Terias lerna*, Felder, Sitzb. Ak. Wiss. Wien, math.-nat.
Cl. xl. p. 448 (1860).
Var. *Terias zoraide*, Felder, Reise Nov. Lep. ii. p. 213. n. 229
("1865").
Terias australis, Wallace, Trans. Ent. Soc. 3, iv. p. 321. n. 9
(1867).
Canara; Darjeeling; Moreton Bay; Rockingham Bay; Sandy
Point. B.M.

44. TERIAS PULCHELLA.

Xanthidia pulchella, Boisduval, Faune Ent. de Madag. pl. 2. f. 7
(1833).
Madagascar; Mauritius. B.M.

45. TERIAS DRONA.

Terias drona, Horsfield, Cat. Lep. E. I. C. pl. 1. f. 13 (1829).
North India; Punjaub. B.M.

46. TERIAS BRIGITTA.

Papilio brigitta, Cramer, Pap. Exot. iv. pl. 331. f. B, C (1782).
Var. *Terias rahel*, Boisduval, Sp. Gén. Léop. i. p. 673. n. 34 (1836).
Terias zoë, Hopffer, Ber. (1855); Peters, Reise Zool. v. pl. 23.
f. 10, 11 (1862).
Terias drona, Wallengren, Lep. Rhop. Caffr. p. 19 (1857).

Var. *Terias caffra*, Felder, Reise Nov. Lep. ii. p. 213 (1865).

Congo; Ashanti; Port Natal; Zoolu. B.M.

47. TERIAS SANTANA.

Terias santana, Felder, Reise Nov. Lep. ii. p. 211. n. 225 ("1865").

Terias rubella, Wallae, Trans. Ent. Soc. 3, iv. p. 323. n. 15 (1867).

Var. *Terias senna*, Felder, Reise Nov. Lep. ii. p. 212. n. 226 ("1865").

North India; China. B.M.

48. TERIAS VENATA.

Terias venata, Moore, Cat. Lep. E. I. C. p. 65. n. 117, pl. 2^a. f. 2 (1857).

Punjaub. B.M.

Nearly allied to *T. drona*, but with a narrower regular margin to hind wings.

49. TERIAS SMILAX.

Terias smilax, Donovan, Ins. New Holland, pl. 20. f. 3 (1805).

Australia.

Seems to come near to *T. sinta* of Wallace; but more nearly resembles *T. smilacina*, ♂, in the figure.

50. TERIAS SINTA.

Terias sinta, Wallace, Trans. Ent. Soc. 3, iv. p. 322. n. 11 (1867).

Moreton Bay. B.M.

51. TERIAS INGANA.

Terias ingana, Wallace, Trans. Ent. Soc. 3, iv. p. 322. n. 10 (1867).

Sidney. B.M.

52. TERIAS FLORICOLA.

Xanthidia floricola, Boisduval, Faune Ent. de Madag. p. 21 (1833).

Mauritius; Madagascar. B.M.

53. TERIAS BRENDA.

Terias brendu, Doubleday et Hewitson, Gen. Diurn. Lepid. pl. 9. f. 6 (1847).

Sierra Leone; Ashanti; Angola. B.M.

54. TERIAS BLANDA.

Terias blanda, Boisduval, Sp. Gén. Léop. i. p. 672. n. 32 (1836).

Terias phanospla, Felder, Reise Nov. Lep. ii. p. 209. n. 221 (1865).

China. B.M.

55. TERIAS SENEGALENSIS.

Terias senegalensis, Boisduval, Sp. Gén. Léop. i. p. 672. n. 31 (1836); Hübner, Beiträge ex. Schm. f. 969, 970 (1837).

Var. *Terias candace*, Felder, Reise Nov. Lep. ii. p. 213. n. 228 ("1865").

Sierra Leone; White Nile.

B.M.

56. TERIAS SUAVA.

Terias suava, Boisduval, Sp. Gén. Lép. i. p. 670. n. 28 (1836).

Terias anemone, Felder, Wien. ent. Mon. vi. p. 23. n. 7 (1862).

China.

B.M.

57. TERIAS NIKOBARIENSIS.

Terias nikobariensis, Felder, Verh. zool.-bot. Ges. Wien, xii. p. 480 (1862).

Ceylon.

B.M.

Near to *T. suava* of Boisduval.

58. TERIAS ÆSIOPE.

Terias æsiope, Ménétriés, Enum. Corp. Anim. in Cat. Mus. Petr. Lep. i. p. 85, pl. 2. f. 3 (1855).

Terias fimbriata, Wallace, Trans. Ent. Soc. London, 3rd ser. iv. p. 323. n. 16 (1867).

Port Macquarie; Rockingham Bay; Port Essington; Silhet?; Hong-kong.

Probably a form of *T. hecabe*.

59. TERIAS HECABE.

Papilio hecabe, Linnæus, Syst. Nat. ii. p. 763. n. 96 (1766); Edwards, Glan. d'Hist. Nat. i. pl. 253.

Papilio hecabe, Fabricius, Mant. Ins. p. 19. n. 201 (1787).

China; Silhet; Moulmein; Aru Islands; Port Essington; Rockingham Bay; N.W. Australia.

B.M.

60. TERIAS HECABEOIDES.

Terias hecabeoides, Ménétriés, Cat. Mus. Petr. Lep. pl. 2. f. 2 (1855).

Nepaul (*Wright*).

B.M.

I believe Nepaul to be the correct habitat of this species, which is scarcely distinct from *T. hecabe*.

61. TERIAS SILHETANA.

Terias silhetana, Wallace, Trans. Ent. Soc. London, 3, iv. p. 324. n. 17 (1867).

Id.? Assam and Borneo.

B.M.

Probably a form of *T. hecabe*.

62. TERIAS DIVERSA.

Terias diversa, Wallace, Trans. Ent. Soc. 3, iv. p. 324. n. 20 (1867).

Id.? Philippines.

B.M.

63. TERIAS SARI.

Terias sari, Horsfield, Cat. Lep. E. I. C. p. 136. n. 61 (1829).

Terias hecabe, var. ♀, Boisduval, Sp. Gén. Léop. i. p. 670 (1836).

Java.

B.M.

Intermediate between *T. tilaha* and *T. hecabeoides*, Ménétr.

64. TERIAS TILAHA.

Terias tilaha, Horsfield, Cat. Lep. E. I. C. p. 136. n. 62 (1829).

Java.

B.M.

65. TERIAS SINENSIS.

Terias sinensis, Lucas, Rev. Zool. p. 429 (1852).

China.

Near *T. tilaha*.

66. TERIAS EUMIDE.

Terias eumide, Felder, Reise Nov. Lep. ii. p. 214. n. 231 ("1865").

Celebes.

B.M.

67. TERIAS ALITHA.

Terias alitha, Felder, Wien. ent. Mon. vi. p. 289. n. 51 (1862).

Ternate; Celebes.

B.M.

68. TERIAS LORQUINII.

Terias lorquini, Felder, Reise Nov. Lep. ii. p. 209. n. 222 ("1865").

Terias tilaha (part.), Vollenhoeven, Mon. Pier. p. 65 ("1865").

Celebes.

B.M.

69. TERIAS ZITA.

Terias zita, Felder, Reise Nov. Lep. ii. p. 210. n. 223 ("1865").

Terias zama, Felder, l. c. n. 224 ("1865").

Menado.

70. TERIAS RAHEL.

♂. *Papilio rahel*, Fabricius, Mant. Ins. p. 22. n. 235 (1787).

Terias tondana, Felder, Nov. Voy. ii. pl. 26. f. 1 (1865).

♀. *Terias tominia*, Vollenhoven, Mon. Pier. p. 66. n. 3, pl. 7. f. 4 (1865).

Borneo.

♂, B.M.

71. TERIAS CELEBENSIS.

Terias celebensis, Wallace, Trans. Ent. Soc. 3, iv. p. 327. n. 32, pl. 6. f. 1 (1867).

Celebes.

♀, B.M.

72. TERIAS CANDIDA.

Papilio candida, Cramer, Pap. Exot. iv. pl. 331. f. A (1782).

Ceram.

B.M.

73. TERIAS PUELLA.

Terias puella, Boisd. Voy. de l'Astrolabe, Ent. pl. 2. f. 8 (1833).

Terias virgo, Wallace, Trans. Ent. Soc. ser. 3, iv. p. 328. n. 35 (1867).

? *Papilio chrysopterus*, Gmelin, Syst. Nat. i. 5. p. 2261. n. 883 (1788-91); Zschach, Mus. Lesk. Ent. p. 88. n. 35 (1788).

Aru Islands.

B.M.

74. TERIAS NEDA.

Pieris neda, Godart, Enc. Méth. ix. p. 135. n. 54 (1819).

♂. *Mancipium fugax Nise*, Hübner, Samml. ex. Schmett. i. pl. 146. f. 1, 2 (1806-27).

Terias tenella, Boisduval, Sp. Gén. Lép. i. p. 657. n. 6 (1836).

Pernambuco; Brazil; Honduras.

B.M.

75. TERIAS ÆQUATORIALIS.

Terias æquatorialis, Felder, Wien. ent. Mon. v. p. 85. n. 46 (1861).

Bogota.

B.M.

Nearly allied to *T. nise*.

76. TERIAS NISE.

Papilio nise, Cramer, Pap. Exot. i. pl. 20. f. K, L (1775).

Var. *Terias limbica*, Felder, Wien. ent. Mon. v. p. 86. n. 47 (1861).

Venezuela; Para.

B.M.

Var. *Terias venusta*, Boisd. Sp. Gén. Lép. i. p. 658. n. 8 (1836).

Panamá.

B.M.

77. TERIAS SOLANA.

Terias solana, Reakirt, Proc. Acad. Nat. Sci. Philad. p. 240. n. 6 (1866).

Mexico.

Allied to *T. nise*.

78. TERIAS NELPHE.

Terias nelphe, Felder, Verh. zool.-bot. Ges. Wien, p. 466. n. 3 (1869).

Mexico.

B.M.

Allied to *T. neda*.

79. TERIAS SMILACINA.

Terias smilacina, Felder, Reise Nov. Lep. ii. p. 208. n. 220 (1865).

Venezuela.

B.M.

80. TERIAS LEUCE.

Terias leuce, Boisduval, Sp. Gén. Lép. i. p. 659. n. 10 (1836).

Var. *Terias nisella*, Felder, Verh. zool.-bot. Ges. Wien, xii. p. 474. n. 17 (1862).

Terias athalia, Felder, Reise Nov. Lep. ii. p. 208. n. 219 (1865).

Pernambuco.

B.M.

81. TERIAS FLAVILLA.

Terias flavilla, Bates, Journ. Ent. i. p. 241. n. 4 (1861).

Bolivia.

B.M.

82. TERIAS CIRCUMCINCTA.

Terias circumcincta, Bates, Journ. Ent. i. p. 241. n. 5 (1861).

Amazons.

83. TERIAS PAULINA.

Terias paulina, Bates, Journ. Entom. i. p. 240. n. 2 (1861).

St. Paulo.

B.M.

84. TERIAS FLAVESCENS.

Terias flavescens, Chavannes, Bull. Soc. Vaud. iii. (1849).

St. Paulo.

Perhaps the same as the preceding. I cannot, however, get hold of the work in which it is described.

85. TERIAS PALLIDA.

Terias pallida, Chavannes, Bull. Soc. Vaud. iii. (1849).

St. Paulo.

I cannot determine this species, for the reason given above.

86. TERIAS MEMULUS.

Terias memulus, Butler, Proc. Zool. Soc. p. 251, Pl. XIX. f. 6 (1871).

Haiti.

B.M.

87. TERIAS DEVA.

Terias deva, E. Doubleday, Gen. D. L. p. 78. n. 7 (1847).*Terias agave*, Donovan (nec Fabricius), Nat. Rep. i. pl. 6. f. 2 (1823).*Terias fabricia*, Poey, Mem. Hist. Nat. de Cuba, p. 252. n. 10 (1851).*Terias agavoides*, Wallengren, Wien. ent. Mon. vii. p. 67. n. 33 (1863).

Brazil.

B.M.

The above is certainly not the *P. agave* of Fabricius; for (as Donovan admits) that author describes the under surface of the apex of the wings as brown, a colour to which age has reduced the under surface of the figure in Cramer. Moreover he does not mention the discal series of red spots of *T. deva*, and he quotes Cramer's figure.

88. TERIAS RETICULATA, sp. n.

♂. *Alæ supra saturate flavæ; anticæ margine apicali-externo decrescente, undato, nigro; posticæ venis minutissime nigro-acuminatis; corpus virescens; anticæ subtus saturate flavæ; margine costali aureo-flavo; venis costalibus nigro distincte terminatis, costa basali nigro conspersa; venis marginis externi nigro acuminatis; margine ipso rufescente; posticæ aureo-*

flavæ, brunneo reticulatæ; maculis tribus griseis (prima basali, secunda costali, tertia internali), punctisque in arcu discali digestis vix conspicuis; corpus flavescens: exp. alar. unc. 2, lin. 4.

♀. *Differt alis posticis angustioribus; anticis ad basin aurantiacis; apice triangulariter nigrescente: exp. alar. unc. 2, lin. 3.*

♂, Archidona; ♀, Quito.

Coll. B.M.

The most remarkable of all the species of *Terias*; it belongs to the *Deva* group, but reminds one of *Pyrisitia gundlachia* in the colouring of the under surface.

89. TERIAS CHILENSIS.

Terias chilensis, Blanchard, Gay's Faun. Chil. vii. p. 17, pl. 1. f. 5 a, b (1852).

Chili.

Allied to *T. deva*, but apparently quite distinct.

90. TERIAS CITRINA.

Terias citrina, Poey, Mem. Hist. Nat. de Cuba, p. 247. n. 6 pl. 18. f. 4-7 (1851).

Cuba.

Nearly allied to *T. dina*, but smaller; both sexes with markings on under surface.

91. TERIAS DINA.

Terias dina, Poey, Cent. Lep. de Cuba (1833).

Terias westwoodii, Lucas, Hist. Cuba, vii. p. 509, pl. 16. f. 2, 2^a (1856).

Terias laræ, Herrich-Schäffer, Corr.-Blatt. Regensb. xvi. p. 120 (1862).

Jamaica.

B.M.

92. TERIAS WESTWOODII.

Terias westwoodii, Boisduval, Sp. Gén. Lép. i. p. 666. n. 22 (1836).

Terias dina, Hübner, Zutr. ex. Schmett. f. 951, 952 (1837).

West coast of Mexico.

B.M.

93. TERIAS STYGMA.

Terias stygma, Boisduval, Sp. Gén. Lép. i. p. 661. n. 14 (1836).

Peru.

Belongs to the *Dina* group.

94. TERIAS HARINA.

♂. *Terias harina*, Horsfield, Cat. Lep. E. I. C. 137. n. 62 (1829).

♀. *Eurema formosa*, Hübner, Zütrage ex. Schm. f. 979, 980 (1837).

Java; Borneo; Amboina; Waigiou; Celebes; Assam; Silhet.

B.M.

Genus 5. PYRISITIA, Butler,
Cist. Ent. iii. p. 44. gen. 17, pl. 1. f. 14 (1870).

1. PYRISITIA PROTERPIA.

Papilio proterpia, Fabricius, Syst. Ent. p. 473. n. 152 (1775).
Mexico; Haiti; Polochic valley; Venezuela. B.M.

2. PYRISITIA GUNDLACHIA.

Terias gundlachia, Poey, Mem. Hist. Nat. de Cuba, p. 246. n. 4,
pl. 24. f. 1-3 (1851).
Nicaragua; Venezuela; West coast of Mexico. B.M.

3. PYRISITIA LONGICAUDA.

Terias longicauda, Bates, Ent. Mo. Mag. i. p. 32. n. 13 (1864).
Guatemala. Coll. Salvin.

6. Description of a New Species of *Tejus* (*Tejus rufescens*)
from Mendoza. By Dr. A. GÜNTHER, F.Z.S.

[Received May 17, 1871.]

The Society has recently purchased five living specimens of a *Tejus*, said to have been brought from Mendoza, which differ from the two species previously known in several respects.

With regard to the general form, proportions of the several parts, and arrangement of the scutes and scales, this Lizard agrees so well with *T. teguexin* and *T. nigropunctatus* that I may dispense with a detailed description, pointing out only those peculiarities in which it differs from the species named. I must remark that the pholidosis is the same in all the five Mendoza specimens which I examined.

On all parts of the body the scales are considerably smaller than either in *T. teguexin* or *T. nigropunctatus*. This is especially conspicuous on the temple, where the scales are reduced to the size of granules. The number of transverse series of scales is about one-fifth more than in the other species. A stripe of minute scales between the supraciliary shields and supraciliary edge. A doublet series, each row formed by five larger scales, above the temple. Only one single mental shield behind the middle lower labial. Posterior part of the tail scarcely compressed, much less so than in *T. teguexin*. Blackish brown, with brownish-red or brownish-yellow markings. These markings are in the form of irregular transverse spots on the back, more distinct on the neck, but mottled with brown on the trunk and behind. An interrupted yellowish band proceeds from the tympanum along each side of the neck to the shoulder, where it is lost among the markings of the body. Tail with the alternate black and red rings rather indistinct. Lower parts brownish